

Mario Pines
University of Trieste
Faculty of Economics

CROSS BORDER BANKING: A CRITICAL BANK SIZE

Key words: banking industry, bank size, over the border banking, asset reallocation.

ABSTRACT

The banking industry merger and acquisition process has been displacing small and medium size local banks under the prevailing two elements: the progressing global telecommunication revolution and the continental banking industry deregulation. A deep reconsideration of the critical bank size hypothesis, with regard to the possible evolving bank functions, raises some expectations. Such evolving factors are affecting the restructuring phase of all the previous models: universal banks, investments and merchant banks, specialized corporate and retail banking entities, private banking and asset management services, in a critical choice between a proper size in local, international and global banks. The 1994 Riegle Neal Interstate Banking and Branching Act, the USA 1999 Gramm-Leach-Bliley Act and the EU mutual recognition principle, as expressed in the EU Directive 646/89, furthermore pose new questions. The most modern legislation provide a complex new framework of limits in order to avoid predatory deposit acquisitions and prescribe compulsory reinvestments paths, aimed to avoid excessive capital attraction toward regional overdeveloped areas. The Community welfare investment provisions and the Reinvestment Act, are generally intended to produce local activity, not discouraged by specific contrary interests, pursuing capital reallocation and predatory investment attitudes. Some hindsight in a developing landscape stimulate an investigation and efficiency test between the role of banks in a market oriented system and the performance of banking oriented models. The critical bank size hypothesis, finally, sets its own proper rules in an enlarging market and in the performance of the new technologies affecting previous behaviour patterns and the unavoidable new model opportunities, where the size, efficiency and profit become viable strategies.

1. INTRODUCTION

The ongoing banking industry merger and acquisition process has been displacing small and medium size local banks under the prevailing two major concurring forces:

- the ongoing global telecommunication progress;
- the prevailing general banking industry deregulation;

which are calling for of a deep reconsideration of the critical bank size hypothesis, with regard to the likely evolving bank functions.

Such evolving factors are affecting all the surviving previous categories: universal banks, investments and merchant banks, specialized corporate and retail banking divisions, private banking and asset management services, spread among local, international and global banks.

In this study, the hypothesis is that a proper critical size can be discovered and assumed in defining the banking industry in its operating units within an open market, in which ideal competition conditions are active.

1. THE CROSS BORDER BANKING ACTIVITY.

The USA 1999 *Gramm-Leach-Bliley Act*, the 1994 *Riegle Neal Interstate Banking and Branching Act* and the *EU Mutual Recognition Principle*, as expressed in the second 646/89 EU Directive, considering the banking industry, have set up new landscapes in the banking community.

The most modern banking legislation protecting communities, not yet common in Europe, provides a complex and difficult new framework of limits and rules in order to avoid deposit predatory conduct and enacts compulsory reinvestments paths designed to avoid excessive capital attraction by regional over-developed areas on one side and the declining of the economic conditions in secluded areas on the other.

Common perceptions suggest an investigation in the foreseeable near future and some efficiency tests evaluating:

- the role of banks in a developing market oriented system,
- the performance of banking oriented financial systems, with relevant shareholder presence and, finally,
- the alternative critical size and global growth model.

The critical bank size hypothesis, ultimately, finds its own proper path in an enlarging market and in the implementation of the new technologies affecting previous behavioral patterns and attitudes within the evident new emerging opportunities in both size and volume of operations under control.

In the United States, the banking industry, generally including banks classified as: *money centres, superregional, regional, end small community banks*, has been reorganized along two different paths, which reflect what has generally occurred in the whole world.

Internationally, banks were allowed to conduct all kind of banking activities and in Europe the large Eurodollar area has been sustained by USA banks doing business abroad; locally, the *international activity* of banks has raised problems at State level: being the USA a Federation, banks were forbidden to expand their activity over the State borders.

In 1994, the *Riegle-Neal Act* has set the foundation of new operative opportunities, which in addition to the local traditional practice, have discovered new territory in a new age for action over the traditional local State surrounding. Though it had been an established practice since when the industry was initiated, it was never changed and all the banking activities were for the first time in 1994 allowed to be carried over the charter State borders on a national basis.

American banks now operate over the border through subsidiaries and branches networks according to a configuration very similar to the one consolidating in Europe, where the banking industry has been admitted to operate over the national limits under a common single agreement envisaged as *Mutual Recognition Principle*. Most of the American innovations are eventually put into action world wide. The product and technology innovations are surveyed and tested on the American market, when they have become qualified procedures, they are globally circulated.

At same time, the technology has torn down the former restrictions and credit partition enacted through the *Glass Stegall Act* in the thirties, and most of the banks have reactivated their brokerage and market business, especially after the *Gramm - Leach - Bliley Act* of 1999. Geographical freedom and relief from national restricted activities, set forth by the two laws, have coupled with the technological innovation; the collapse of the information technology costs has, inevitably, by synchronized coincidence led to the complete worldwide restructuring of the banking and financial institutions segments.

Most of the researches conducted in the banking sector show that banks concentration's drive are indeed various: there is not a single evidence that may justify them systematically, nevertheless, the prevailing explanation of the contemporary concentration stage, since the beginning of the '90, seems to be linked to the progressive removal of the national barriers and to the consequent physical extensive expansion of the individual banking activities.

Without such a boundaries removal there would not had been such an intense concentration stage and all the amalgamation of the banking activities and functions. The new official framework has generated a relevant amount of mergers and acquisitions which will last and presently the final industry configuration seems to be unpredictable.¹

Official statements from Central Banks Governors reports provide, as a rule, a complete picture of the undeniable progresses conducted by the banking industry in many different countries during the years.

It is necessary, although, to consider the perspectives and the problems the world will face in the coming years, concerning the unpredictable relations with families, firms, authorities, shareholders and employees as they will develop from international operations and aggressive banking attitudes.

First of all, the perspectives of a global control of the banking activity, presently missing, imply the recurring issue of transparency and accuracy,

¹ Rhoades Stephen A. (2000) Bank Mergers and Banking Structure in the United States, 1980-98, Staff Study, BGFERS, Washington, pag. 1.

with respect to the multiple relations with families, with firms and public entities as banks develop huge platform in the allocation of financial instruments.

Furthermore, within the banking industry an erroneous concept of competition may sometimes induce some operators, particularly investment banks or investment funds, to favor and gain from supporting investment programs and consequently pressure savers portfolio choices, affecting the market rationality and efficiency, tempering the excessive and obsessive competitive misconduct, associated with deviating management in the *new economy* markets. Conflict of interests surfaced and damaged client relationships in areas where consumers were not sufficiently informed and able to monitor their trustee wrongdoings. Generally, short time oriented clients are induced in risky investment schemes, more favorable to issuers than to subscribers.

It is a modern bank duty to adopt and follow a dynamic financial structure within its market share, under an adequate governance policy, in order to maintain a necessary steady growth condition and sufficient level of capital, to ensure the potential loss risks related to their lending activities.

The removal of the geographical banking industry restrictions within the origin State boundaries, ordained by the *Interstate Banking and Branching Activity Act*, has caused a progressive change since the *Regale-Neal Interstate Banking and Branching Efficiency Act* as approved by the Congress in the year 1994.

In the year 1997, to verify the adoption by all the States of a set of rules to guarantee the access to their single markets, the law had foreseen a deadline and the prevailing number of States succeeded to implement in proper time the adjustment of their inner legislation, in order to satisfy the new rules.

Most of the States have adopted a reciprocity rule, some other have imposed the acquisition of a local bank, only Texas and Montana, in a first moment, have prohibited the access to outsider banks, but have afterwards removed the obstacle.² The new over the border activity has induced a first set of acquisitions and sales in the areas closer to the borders, with spread fears of overwhelming effects by banks operating as international bank when doing business over the border, lately it developed towards more satisfactory global standards, according to the classification of McCauley, Ruud, Woodridge (2002)³, due to the original lack of subsidiaries and branches and to the limitations of branches with the sole purpose of collecting deposits.⁴

² In Focus: "States Easing Interstate Branching Curbs", March 119, 2001 *American Banker.com* <<http://www.americanbanker.com>>

³ McCauley R. N. Ruud J. S., Woodridge P. D., "Globalizzazione dell'attività bancaria internazionale" *Rassegna trimestrale BRI*, marzo 2002. http://www.bis.org/publ/qtrpdf/r_qt0203ita_e.pdf

⁴ Chapter II – Federal Reserve System – Part 208 membership of State Banking Institutions, § 208.7 Prohibition against use of interstate branches primarily for deposit production.

(a) Purpose and scope—(1) Purpose.

The purpose of this section is to implement section 109 (12 U.S.C. 1835a) of the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (Interstate Act).

(2) Scope. (i) This section applies to any State member bank that has operated a covered interstate branch for a period of at least one year, and any foreign bank that has operated a covered interstate branch licensed by a State for a period of at least one year. (ii) This section describes the requirements imposed under 12 U.S.C. 1835a, which requires the appropriate Federal banking agencies (the Board, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation) to prescribe uniform rules that prohibit a bank from using any authority to engage in interstate branching pursuant to the Interstate Act, or any amendment made by the Interstate Act to any other provision of law, primarily for the purpose of deposit production. <http://www.access.gpo.gov/nara/cfr/waisidx_02/12cfr208_02.html>

The ability to offer web based banking services has, nevertheless, outdated the *Interstate Banking* limitation: considering the worldwide internet banking facilities it is easily understood why the *House Financial Services Committee*⁵ has reconsidered the *Regale-Neal* rule in order to make possible *remote banking* facilities as well.

In the year 1999, an amendment to the *Gram-Leach Bailey Act* has caused the federal system to coordinate the accessory legislation related to the internet banking with the over the border activity, introducing the *Regulation H*.⁶

Within the Chapter II – Federal Reserve System – Part 208⁷, related to the registration of bank units, the 28 December 1995 amendment, has readdressed the *Neal-Neal Act* under the consideration of the adequacy of local measures apt to implement the limits to the sourcing of funds in their allocation choices, in order to exclude the opening of branches under the sole purpose of collecting funds to be redeployed outside the State boundaries, hypothesis absolutely excluded by the *Community Reinvestment Act*.⁸

The specific alertness of the competent State authorities: *OCC - Office of the Controller of the Currency*, has been regular and recurring with auditing activities every 24 months, in order to ascertain the investment structures in the local *communities*.⁹ During the present transitional period, the American authorities are considering to generally forbid any direct or indirect purchase of a local bank or bank facility with the sole purpose of acquiring deposits *over the border*.

The goal has been to prevent in any form out of the State controlled branches or subsidiaries of a bank from acquiring relevant fiduciary assets to be reallocated abroad and to verify the eligibility of a growing structure.

The administrative definition of a bank proper size lies with the *Regulation H*, which in its most updated structure introduces a definition of *eligible bank* to rapidly test the supervision of the preconditions in the area of capital structure, operational framework and operating programs, in order to verify the potential expansion and the areas of potential operations.

Under these conditions an *eligible bank* must

- evident at capital ratios, *total*, *tier 1*,¹⁰ and *leveraged*, not less than 10, 6, 5;
- be classified according to the acronym standard *CAMELS*, meaning *Capital, Assets, Management, Earnings, Liquidity and Sensitivity to market risk*, in a level not exceeding 1 or 2;¹¹

⁵ <<http://www.house.gov/financialservices/>>

⁶ <<http://www.bankinfo.com/Regs-aag/reg12208.html>>

⁷ *Sec. 208.21 Community development and public welfare investments* <http://www.access.gpo.gov/nara/cfr/waisidx_01/12cfr208_01.html>

⁸ The Community Reinvestment Act (CRA) is aimed to induce financial intermediaries, particularly banks, to accept credit filings locally, even in low income areas, when complying with normal credit standards. The law was issued by Congress in 1977 (12 U.S.C. 2901) and has been amended in May 1995.

⁹ <<http://www.occ.treas.gov/index.htm>> Office of the controller of the Currency, base body in the monitoring of the State banking industry.

¹⁰ As defined in Basle in 1988, adopted by the FED as an operative model in 1999.

¹¹ The classification is assumed according to a scale running from 1 to 6. Banks qualifying as 1 –2 are considered exempt from any relevant character in monitoring procedures, an alternative value between two and five shows an inadequacy classifiable as moderate and extreme.

- be judged by specific local legislation related to banks in a class not lower than 1 or 2;
- have no relevant proceeding related to the infringement of rules and local laws or at Federal level.

Whenever the unit under observation doesn't qualify as *eligible bank*, its under-performance may be alternatively offset by the eligibility of its holding corporation or controlling parent corporation.

From an economic point of view, goal of larger banks has always been the pursuing of a critical size, useful to supply newer and more articulate products capable to attract as many clients as possible. The attraction of a small bank, called *community bank* and well locally established, has always been a larger bank's expectations to acquire new clients and offer innovative products in the area of banking, insurance and financial products.

The only aspect of its local environment represents a precondition of attraction to the *cross selling* expectations of larger banks, interested to expand their size and their sphere of influence within local communities.

The time horizon of an acquiring bank, in the restructuring fundamental relationships may, at first, foresee the build up of its relationship with the existing customers base, apart from the ever present profit purpose assumable as an impelling *ROE* target, seeking successive *cross selling* opportunities, ranging from the consolidation of its relationships basis with that of the target bank.

The existence of the *Community Protection Act* makes the acquisition more complex, in term of local relationships, whenever strict interaction with locals are missing. It seems unlikely that a straightforward *predatory acquisition* purpose, in order to acquire size, mass and volume to reallocate funds from less developed areas towards high return districts, be disclosed.

The *Community Protection* provision, as enacted within Unites States, indeed implies complex monitoring procedures: banks must observe and file with the specific authorities the ethnic origin, sex, rate of loans denial within specific local districts which, at the very beginning of such a monitoring procedure, could be difficult to implement in Europe.

In the USA, according to the new rules, as reported in the local State legislation, active banks will be obliged to deliver the interest rates applied, whenever superior to the ranges anticipated by the authorities, furthermore, banks will file with the Fed detailed reports about the gap between annual rates as applied over new mortgages and the homogeneous time horizon bonds rate.

Over the border activities bring in new issues linked to the chance of an excessive credit capacity in the financial sector, due to the rapid concentration phase, currently surfacing within the UE after the geographical barriers have been removed and jointly existing in the UE and in the USA, as shown by Davis – Salon (1998).¹²

The American reform of the banking industry legislation, with regard to the mobility and reallocation of incoming funds, brings in, as diverted to high yielding areas in terms of price and risk, one of the most relevant potential

¹² Philip Davis E. Sinikka Salo, (1998), Excess capacity in EU and US banking Sectors Conceptual, Measurements and Policy Issues, Frankfurt 1998.

issue in the global regulation of the banking industry apart from the specific Basle 2 perspective.

2. THE EUROPEAN CASE

Considering the European banking industry, the concentration issue will not fail to become actual and influence the bank's size profile which, necessarily, will be constrained by usual patterns based on simple economic grounds, while pursuing operational profit goals (Basle 2).

In Europe, banks operate much more as international banks than as global players, searching for special developed areas with high level productivity to invest and less developed areas to provide capillary sources of funds. Such an outlook is likely to reverberate over the UE industry and pretty soon endorse preconditions to the introduction in Europe of measures comparable to the North American *CRA Community Reinvestment Act*.

The European Common Market, to a greater extent originally established as a custom union, turned into the European Union, the European Council has, afterwards, been induced to enact the *Single Act* and start an *Intergovernmental Conference* in order to draft a new treaty which became in the year 1993, the Maastricht agreement and led to the *Monetary and Economic Union*, while the progressive unification of some banking legislative principles were definitely put into practice through the banking directives n. 77/780/CEE and n. 89/646/CEE, addressed to the banking sector.

Some specific legislative aspects have ensured the definitive notion of banks as enterprises, as definitively stated in the directives giving up the idea of banks as provider of public services, while taking into account the final banking and financial functions¹³

The original Werner monetary union project, named after the Luxemburg Prime Minister Pierre Werner, when drafted envisaged a ten year period, unfolding itself through three different stages towards a Monetary and Economic Union. The project wrecked during the large economic crisis of the seventies and eighties: the collapse of the fixed exchange rates system as originally agreed at Breton Woods, the oil shocks and the consequent extensive recessions. Similarly, the 1972 agreement signed by some Central Banks to limit the exchange rates fluctuations, envisaged as the European Monetary Tiers, missed its expectations due to the discrepancies among Countries running a strong currency and Countries hosting weaker ones.

On the contrary, during the following years, it was possible to introduce a single European currency, an integrated Central Bank System and eventually a single banking and financial market.

As a consequence, a row of concentrations and enlargement mergers took place both nationally and *over the border*, with a vast effect over the competition in the single market, affecting the efficiency of the surviving units and the stability of the overall system out of the restructuring process leading to an euro Central Bank System.

The general merging and adjusting processes face some specific questions arising from the restructuring of the national banking systems, on the road to

¹³ Lgs.D. 1 September 1993, n. 385.

an international banking model and eventually toward the globalization environment, which largely differentiate from each other McCauley, Rued, Woodridge (2002).

The old issue about the banking competition has therefore found new vigor and strength in the analysis of managing and restructuring the system, the widening of the market and the specific new bank's dimension within different national banking systems.

The prevailing opinion outlines the absence of competition as harmful to the overall system as a whole. The most prevailing and accepted perception with regard to the banking competition is identifiable in the angle that the lack of competition within the banking industry might result negative for the system taken as a whole.

Since the banking system, apart from the inner forces reflecting the different participants tasks, must be understood and considered as a chain of transmission of the monetary and economic policies, the monetary authorities should generally pursue the largest competition, possible through the eradication of all the hindrances to the free access and free activity in both banking and financial markets, condition accomplished by removing the entrance obstacles and promoting the largest operational efficiency Vitas (1992).¹⁴

Alternative prevailing theories consider the banking system structure and the behavior of the unit banks playing a decisive key role in the economy, much more than commonly believed, therefore a stronger position of banks in highly concentrated areas, inevitably, implies higher interest rates, less volume of operations and less bank efficiency.

This perspective appears unsatisfactory and not to be fully embraced, since new initiatives seem not to be favored in systems characterized by high concentration and low competition. The implied lack of high level of monitoring procedures and less efficient allocation of banks resources, might be attributed to the peculiar inefficient market structure, where low competition may, more or less, determine the prices structure and the condition and volume of loans, according to the prevailing relationships and agreements among the present banking operators.

Pagan research as well (1993)¹⁵ showed that a stronger banking system may be part of higher banking price structures and lowers both loans volume and bank efficiency.

A banking system rigorously tied up to the real asset collateral lending generally hampers the screening of the good results of a client and the monitoring of financial conditions as envisaged in promoting Basle 2.

Operational capabilities, almost unlimited from a geographical point of view as a consequence of the present wide deregulation process allow banking activities in almost all global market segments, through a diversification of products, useful to maintain good client relationship, both over the short and medium time horizon and over the national borders as well.

¹⁴ Vitas Dimitri, 1992, "Financial Regulation Changing the Rules of the Games", Washington, DC. World Bank.

¹⁵ Pagano, M. 1993, "Financial markets and growth, an overview", *European Economic Review*, Vol. 37, pp. 613-622

Whenever market forces are prevailing, the widening of the average interest rates spread, measured between loans and deposits, outcome of raising loan rates and lowering deposit rates, within the scope of a higher profit, reflects itself over the size of the banking intermediation, as it reduces the equilibrium supply of credit and slow down the general growth rate of the economic system and that of new capital Guzman (2000).¹⁶

On the other side, as with a large number of active banks the market competition grows, so the chance of low profile loans in favour of low standard weak applicant firms likely becomes stronger.

The release of real or personal collateral, as an alternative to the monitoring of borrowers both management and financial condition, represents, indeed, a choice influenced by the more or less powerful competition: the larger the banks number, the stronger the competition and therefore the softer the auditing of the prospects financials and the shorter and smoother the firms data analysis, in assessing the firms real credit standard both over the long and on a shorter time horizon scenario.

In a thin credit market, with scarce competition attitude, it seems reasonable for the banks to assume a comfortable condition in avoiding expensive and cumbersome credit filing procedures, they prefer to adopt alternative attitudes, more prone to assume securities and personal collateral easily insurable and verifiable as an objective and systematic precondition in granting loans.

Similarly, the particular expansion or stagnation conjuncture may reflect itself in a different way over the quality and amount of available credit in the direction of a tighter or looser attitude in formal monitoring procedures, related to the concession of credit according to a more or less actual competition among intermediaries.

In reconsidering the European literature and the available research about the efficiency and organizational approach, the *contestability* theory synonym of competitive accessibility, widely developed by Bauman, Willing (1981) seems applicable in verifying the actual potential of the *market entry*, from an other angle, the objective chances to access and succeed are challenged by the level of concentration and competition.

In the present deregulation stage and large removal of inward barriers, the target of the proper competitive bank's size seems to prevail over any other concern in acquiring and establishing as much market share as possible, option suggested by specific regulation and by individual time horizons, dealing with medium and long time strategies.

As, in tracking credit market stability and savers safeguard targets, strict regulation policies accompanied by tight branching and subsidiaries control, were finally dropped, the new freedom has been promoting an overgrowth of the national bank size, which in some cases has led to an imperfect competitive function in the credit supply system.

In such a situation, the ever prevailing pursue of marginal deposits has induced growth strategies not consistent with strict economic goals or carefully

¹⁶ Guzman, M. 2000, "Bank structure, capital accumulation, and growth: A simple macroeconomic model." *Economic Theory*, Vol. 16, No. 2 <<http://www.dallasfed.org/htm/research/erpapers/99-07.pdf>>

adequate efficiency targets; the first symptoms to surface have therefore been general feelings of overcapacities.¹⁷

Apart from the cyclical objective shortage of demand,¹⁸ previous occurrence examined by Franklin (1995) as hypothesis of structural decline in banking activity - such events as recurring technological *shocks* or the contemporary expansion of the third generation *e-banking*, leads to an eventual excess of capacity within the banking industry and might be the consequent erosion and exhaustion of the resistance to the inflow in the market of new concurrent and financial intermediaries practices and eventually the slow but predictable technological markets evolution Pines, Franklin, (1989)¹⁹.

Such an European perspective might become a potential concern, in consideration of the absence of appropriate protection policies as the *Community Protection Act*, whether the banking industry would pursue a concentration process trying to generally reach the assumed critical size

The perceivable or unnoticeable, or only potential redundant banking capacity, is an indicator and consequence of the simultaneous paths, pursued by banks within the system and always recognizable as:

- the largest possible size;
- the highest efficiency target;
- the biggest profit goal;

which are joint tasks, pursuable only under very peculiar circumstances.

A *pro tempore* path in uniformly achieving the three targets and assuming the critical size in the new European environment, might only be viable under expectations of a reconcilable size increase: when a thin competition background and a preferential banking setting, within the regulatory framework, allow a run on depositors by means of a decrease of the interest rate spread, eventually economically offset by a larger increase of available funds.

During the last decades, under strict branching assignment, when the only relevant indicator in allowing a bank's expansion was the dynamic growth of its fiduciary deposits, size was the prevailing target of banks in most countries. By general rule, every authorization to open new branches was connected to the effective rate of raising savings and money deposits within the system and under strict allotment rules.

The apparent low profile attitude may not be disregarded, so long as the economies of scale drive bank mergers and acquisitions through the ongoing concentration stage and the specific technological developments produces an overall excess in the offer of banking services.

¹⁷ "...deregulation tends to stir up widespread competition and may lead to situation of excess capacity, partly by rendering existing capacity...redundant." Philip Davis E. Sinikka Salo, (1998), Excess capacity in EU and US banking Sectors Conceptual, Measurements and Policy Issues, Frankfurt, pag. 5.

¹⁸ Edwards Franklin R., Frederic S. Mishkin, "The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy", FRBNY *Economic Policy Review*, July 1995.

¹⁹ Pines, M. - Edwards Franklin, "La volatilità del mercato a pronti e la negoziazione a termine e di tipo future", in *Banche e Banchieri*, Milano, 1989.

As an outcome, the leading efficiency of some major global players will stimulate the telecommunications improvements, the information profile of the *bank structure* and the further likely evolution of the modern technology applicable in the global unified payment and settlement systems.

Another necessary suggestion, in reconsidering the concentration and the parallel expansion of the banking system, takes into account the existence of limits and sartorial *antitrust* restrictions, capable to pose formal limitations to the concentration and amalgamation processes themselves, when pursuing the critical size.

A common feature of the enlargement of banks trough the acquisition process may be found in the general operational division of banks in corporate, retail and private structured bodies.

Up to now, in the Europe, as in other areas, characterized by low profile financial systems, specific operational limitations have not formally been enacted and authoritative interventions, in the field of merger and acquisitions, are very rare in safeguarding the market level of functional specialization.

Valuing the market safeguarding policies, and the current level of competition, the European principles diverge from the North American ones, in assessing the excessive concentration, the UE employs the *dominance test*, while the USA authorities, to test the violation of the supposed proper level of competition, make use of the *substantial lessening of competition* test,²⁰ the applied principle tests the sensible lessening of competition in violation of the assumed compensating consumers rights.

In North America, as a *fallout* of a perceivable weakening of the market competition, wide administrative guidelines envisage the *tradeoff* between the related benefits and costs. It has been a long time since the inevitability of a vast revision of the legislature, concerning the banking activities, was deeply considered, especially in the seventies, after the partial liberalization promoted banking activity over the border, ever since rapidly growing.²¹

The European *antitrust* authority has started a full revision of all the standards applicable in any merger occurrence that may appear too questionable and incautious.

In particular, the adoption in Europe of a common monetary legal tender and the concentration of the monetary issuance function with a Central European Banks System, with the national central banks federally joined in a single integrated system, represents the radical deregulation stemming from the *single act*.

Within the EU Countries and without any limit, the guidelines and directives affecting the banking national legislations, opening the financial markets to all the financial intermediaries, have inspired the restructuring of all the national

²⁰ Congress sought to avoid this type of incipient harm when it amended the Clayton Act in 1950 to prohibit mergers that "may...substantially...lessen competition, or...tend to create a monopoly." Hawker N., *Questions HP/Compaq Merger, Saying It Points to Need for Strong Remedy in Microsoft*, 2001, American Antitrust Institute, <<http://www.antitrustinstitute.org/recent/141.cfm>>

²¹ Goldberg G. Lawrence & White J. Lawrence, *Deregulation of Banking and Securities Industries*, Boston 1979. Berger N. Allen, Bonime D. Seth, Goldberg G. Lawrence and White J. Lawrence *The Dynamics of Market Entry: The Effects of Mergers and Acquisitions on Entry in the Banking Industry* Board of Governors of the Federal Reserve System, December 8, 1999

markets with the final result to establish one single open market, where the proper size of the single banks comes again under necessary scrutiny.

This complex industry must now be reviewed according to the radical mutations in the single market while the single currency has sharpened the inter European competition. In soliciting international deposits and enhancing the reallocation processes under a single currency denomination and in a real time financial transactions environment, banks are assuming a new unforeseeable role.

In a new set of mutual relations, the enlarging process must be studied in light of the coexistence of the three different banks' potential objectives: the profitability, the operating overall size and the allocation efficiency, which might coincide and define the critical bank size.

3. THE CRITICAL SIZE MODEL THEORY.

There is an apparent quantitative contradiction in lowering the interest rates spread, described as difference between the interest rates weighted average on both sides of the financial statement, in order to raise marginal deposit volumes and the net profit strategy; such conduct seems to be inconsistent if simultaneously adopted. As shown later, in a growing efficiency of the banks functions²² - verified in particular by the same weighted average values under the condition of a critical essential assets growth - the expansion of profits in absolute value, is possible only when the *trade off* between the interest rates spread reductions and the henceforth larger fiduciary deposits and the preexisting unitary higher gross profit, but on a lower deposit base, results positive.²³

In a first approximation, being

- IL = initial liabilities
- IA = initial assets
- EV = equivalent average value
- Rn = numerary reserve
- $\dot{i}a$ = active interest rates weighted average before the variation
- $\dot{i}a'$ = active interest rates weighted average after the variation
- $\dot{i}l$ = Interest rates weighted average before the option, liabilities
- $\dot{i}l'$ = Liabilities interest rates weighted average after the option

the costs related to the increase of paid interest rates result to be:

$$\Delta IL * EV * \dot{i}l' + IL * EV * (\dot{i}l' - \dot{i}l)$$

²² “...an efficient firm is one that reaches the optimal size for its industry (scale) and that produces the optimal mix of products given the prices of their production factors (scope).” Cfr. Group of Ten, Report on consolidation in the financial sector, London, 2001, pag 248.

²³ The definition of bank efficiency may be accepted as stated in the following wordings: “A firm is cost efficient if it minimises costs for a given quantity of output; it is profit-efficient if it maximises profits for a given combination of inputs and outputs”. Cfr. Group of Ten, Report on consolidation in the financial sector, cit., pag. 248.

meanwhile the correspondent advantages may be straightforward compared with the spread loss over the preexisting fiduciary deposits, being

$$\dot{i}a' < \dot{i}a \text{ and } \dot{i}l' > \dot{i}l$$

$$(i) \quad \Delta IA * EV' * \dot{i}a' > |IL * EV * (\dot{i}a - \dot{i}a')|$$

where (i) represents the disequation between the prevailing gain due to the acquired new deposits ΔIA and the absolute value of the loss in term of a lower spread over the preexisting initial liabilities IL .

The bank' size expansion pursued through the application of progressive lower interest rate spreads and therefore higher bank efficiency and connected higher net profit, becomes possible as long as the disequation (i) is verified, hypothesis not always truthful and possible, it is indeed effective in only very peculiar circumstances of potential positive balance between costs and benefit, influencing the financials by means of changes in the interest rates during aggressive acquisition of deposits in the system, both directly or through the merger and acquisition practice.

In a short detailed scheme the approach may be outlined as:

expected net marginal benefit linked to the deposits growth:

$$\Delta IA * EV' * \dot{i}a' - IA * EV * (\dot{i}a - \dot{i}a')$$

less costs incurred in reviewing the differential between interest rate weighted averages in attracting deposits:

$$\Delta IL * EV * \dot{i}l' + IL * EV * (\dot{i}l' - \dot{i}l)$$

where

EV = adequate average value on paid deposits

EV' = adequate average value of productive assets

If

Δi = $(\dot{i}a - \dot{i}l)$ interest rates spread before the variation

$\delta i'$ = $(\dot{i}a' - \dot{i}l')$ interest rates spread after the variation

being effective the relationships:

$$IA = IL - Rn$$

$$\Delta IA = \Delta IL - \Delta Rn$$

since IA , the beginning total initial assets of the period, equals the corresponding fiduciary deposits basis IL - initial liabilities - after the liquid fruitless asset reserves Rn are considered, as preexisting values and as well as variations, in the case of a marginal deposits aggressive acquisition, the bank expansion in size results possible and constructive, through a reduction of the interests rates spread when the following disequation is effective:

$$\begin{aligned} & \Delta IL * EV * \dot{i}a' - \Delta Rn * EV * \dot{i}a' + Rn * EV * (\dot{i}a - \dot{i}a') - IL * EV * \dot{i}a + IL \\ & * EV * \dot{i}a' > \Delta IL * EV * \dot{i}l' + IL * EV * (\dot{i}l' - \dot{i}l) \\ & \Delta IL * EV * (\dot{i}a' - \dot{i}l') - IL * EV * (\dot{i}a - \dot{i}l) + IL * EV * (\dot{i}a' - \dot{i}l') \end{aligned}$$

$$\begin{aligned}
& - \Delta Rn * EV * \dot{i}a' + Rn * EV * (\dot{i}a - \dot{i}a') > 0 \\
& \text{and excluding} \\
& - PR * EV * (\dot{i}a - \dot{i}l - \dot{i}a' + \dot{i}l') \\
& - IL * EV * [(\dot{i}a - \dot{i}l) - (\dot{i}a' - \dot{i}l')] \text{ we get} \\
& \Delta IL * EV * \delta i - IL * EV * (\delta i - \delta i') - \Delta Rn * EV * \dot{i}a' + Rn * (\dot{i}a - \dot{i}a') > 0
\end{aligned}$$

If in the case a general monetary stability and in the absolute quantity of the fiduciary deposits in the system, the progressive upgrading of operational management requires some level of progressive increase in the interest rates spread as well, such circumstance denies the theory of the progressive efficiency.²⁴

The inconsistency may be overcome by the introduction of high technological processes which increases the bank efficiency and, especially, when the dimension and negotiated quantities necessarily increase through the mergers and amalgamations among different banks, even if the total monetary volume maintains a constant value, in consideration of the lack of external factors such as: not impaired balance of payments, an inconsistent financing of the public sector or an increased volume in the financing of the banking sector by central banks.

The *trade-off* between the thinner intermediation spread and the higher level of gross overall profits, as a consequence of larger fiduciary mass, according to the previous statements, rewards the progressive systematic growth of the bank size, often permitted by the opening of new markets in geographical sense and by the rapid developing available technology, unpredictable in its constant evolution²⁵.

5. CONCLUSIONS

As well known, the banking industry has been universally shrinking in number of units, growing in its units size, volume of operations and has been internationally expanding in the systematic pursue of size, efficiency and profit targets. The change has been favoured by the large deregulations, technology developments and market integration where banks are heading toward a critical size, to take advantage of economies of scale, product and asymmetries within the global arena.

In the most likely evolution of the banking structures, always important under the general economy outcome profile, the new stage of regulation, related to the international presence and size of banks, requires a system of disclosures and communications constraints where financial institutions are supposed to supply and observe strict size and capital guidelines, in order to clearly control

²⁴ "In conclusione, le condizioni di equilibrio finanziario potrebbero risultare temporanee e volgere a permanere solo se la distanza tra i tassi di interesse, attivi e passivi, aumentasse, in guida da accrescere pure il *cash flow* di gestione." Cfr. BIANCHI T., *La banca: l'economia delle aziende di credito in mercati integrati*, cit., pag. 55.

²⁵ Pines. M. *Integrazione dei sistemi ed assetto della Banca Moderna*, Cedam Padova 2003.

all the risk undertakings, which may damage the bank image profile and to readjust the existing information's and operational asymmetries in the markets.

Furthermore, the necessity to monitor bank risks, competition and reallocation capabilities are imposing new strict rules in order to avoid an uncontrolled asymmetric development of banking activities after the administrative and national boundaries have been removed and banks have become at least international in their operations.

The adoption of borrowers monitoring procedures and risk assessing strategies, imply a necessary critical size, which may be only met by economically pursuing profit, efficiency and size at same time.

This in open conflict with the practices of multiple borrowing and with the principle asserting the credit practices based on the self perpetuating collateral valuation principles and local unit banking models.²⁶

In the Italian environment, the past absolute inconsistency of equity structure within the banking industry, has assumed the role of a decisive factor in the privatisation and restructuring of banks, and a drastic reduction in banks number has surfaced, after decades during which the banks have been operating almost without perceptible equity.²⁷

The present evolution of the international regulatory framework has been focused on the institutional role of the Basle bank and on the risk perspective alone, but new angles are latent and, in the near future, may suggest a new global regulation phase.

The central issue to the definition and the qualification of the implicit risk in the banking activity is the finding of some common guidelines in the regulatory process and the requirement of the minimum equity basis has now entered the stage of the international banking industry as well.²⁸

From the maximum limits to the assumable risk, determined by the weighing of the assets classes, in the concern of the volatility of their market value as a balance between the NPV (Net Present Value) of the loans and the costs of the financing as a link to the limit of some equity basis, to the requirement of compulsory deposits insurance, the path seems still too steep toward the discovery of a satisfactory scientific solution to the problem.²⁹

The critical bank size, easily discovered under a quantitative point of view lies, apart from the likely pursue of simultaneous maximal size, efficiency and profit, on the technological developments, on the deregulation processes and

²⁶ "Più sovente di quanto non si creda si rilevano, presso le banche, carenze nel controllo dell'evoluzione dei rischi dei prestiti, successivamente alla erogazione dei medesimi e di adeguato 'monitoraggio' delle relazioni con la clientela. Ciò forse per l'errata stima della continuità delle politiche di indebitamento dei clienti e, quindi, della difficoltà di fatto di recedere dal rapporto di affidamento." Cfr. BIANCHI T., *La banca: l'economia delle aziende di credito in mercati integrati*, cit., pag. 172.

²⁷ "Chi teorizza sulla più alta redditività di banche con contenuto assorbimento di mezzi di diretta pertinenza, probabilmente dimentica che non si possono porre a raffronto coordinazioni in atto di gestione con altre potenziali. È per altro evidente che non necessitano altri capitali propri a chi non abbia programmi di gestione intonati alla nuova realtà della globalizzazione economica e dell'integrazione dei mercati monetari e finanziari." Cfr. BIANCHI T., *La banca: l'economia delle aziende di credito in mercati integrati*, cit., pag. 200.

²⁸ "This Summer, Federal Reserve bank of New York President William J. McDonough, who chairs the Basel Committee, said the new capital rules will be published in early 2002 and implemented in 2005." Cfr. *Basel Panel still refining capital rules*, December 14, 2001, American Banker, in <<http://www.americanbanker.com>>.

²⁹ Santomero A. M., *Commercial bank risk management: an analysis of the process*, from <http://knowledge.wharton.upenn.edu/show_paper.cfm?id=375>, 1997.

on the globalization of the world economy, which scenarios bring up the issue of risk and capital basis in a not fully discovered economy sector, which has been since many years foregoing the political and administrative world integration and which is lacking a global controller.

REFERENCES

- Bianchi T. *La Banca - L'Economia delle Aziende Di Credito In Mercati Integrati*. Torino 1999
- Franklin R. Edwards, Frederic S. Mishkin, *The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy*, FRBNY Economic Policy Review, July 1995.
- Goldberg G. Lawrence & White J. Lawrence, *Deregulation of Banking and Securities Industries*, Boston 1979. Berger N. Allen, Bonime D. Seth, Goldberg G. Lawrence & White J. Lawrence *The Dynamics of Market Entry: The Effects of Mergers and Acquisitions on Entry in the Banking Industry Board of Governors of the Federal Reserve System*, December 8, 1999
- Franklin R. Edwards, Frederic S. Mishkin, *The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy*, FRBNY Economic Policy Review, July 1995.
- Guzman, M. 2000, "Bank structure, capital accumulation, and growth: A simple macroeconomic model." *Economic Theory*, Vol. 16, No. 2, pag. 421 - 455. <http://www.dallasfed.org/html/research/erpapers/99-07.pdf>
- McCauley R. N. Ruud J. S., Wooldridge P. D., "Globalizzazione dell'attività bancaria internazionale" *Rassegna trimestrale BRI*, marzo 2002. http://www.bis.org/publ/qrpdf/r>_qt0203ita_e.pdf
- Pagano, M. 1993, "Financial markets and growth, an overview," *European Economic Review*, Vol. 37, pp. 613-622
- Philip Davis E. Sinikka Salo, *Excess capacity in EU and US banking Sectors Conceptual, Measurements and Policy Issues*, Frankfurt 1998,
- Pines. M. *Integrazione dei sistemi ed assetto della Banca Moderna*, , Cedam Padova 2003.
- Pines, M. - Edwards Franklin, "La volatilità del mercato a pronti e la negoziazione a termine e di tipo future", in *Banche e Banchieri*, Milano, 1989.
- Rhoades Stephen A. (2000) *Bank Mergers and Banking Structure in the United States, 1980-98*, Staff Study, BGFERS, Washington
- Santomero A. M., *Commercial bank risk management: an analysis of the process*, from http://knowledge.wharton.upenn.edu/show_paper.cfm?id=375, 1997.
- Vittas Dimitri, 1992, "Financial Regulation Changing the Rules of the Games", Washington, DC. World Bank